

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (original): An imaging head which faces an imaging surface and is relatively moved along the imaging surface in a predetermined scanning direction, the imaging head comprising:

an imaging element group including a plurality of imaging elements in a plane substantially parallel to the imaging surface, the imaging elements being two-dimensionally arranged, and the imaging element group generating a group of image pixels at the imaging surface in a two-dimensional arrangement which is inclined, as a whole, at a predetermined inclination angle with respect to the scanning direction; and

an alteration section which, on the basis of a difference between the predetermined inclination angle of the imaging element group and an actual inclination angle of the image pixel group, alters a number of image pixels that are employed in a direction which is inclined from the scanning direction by the actual inclination angle.

2. (original): The imaging head of claim 1, further comprising a resolution conversion section which converts image data so as to convert a resolution of the image data in a direction intersecting the direction of relative movement to a resolution of the image pixel group in the direction intersecting the direction of relative movement.

3. (original): The imaging head of claim 2, wherein the conversion of the image data includes at least one of magnification and reduction of the image data.

4. (currently amended): The imaging head of claim 1, wherein the imaging element group comprises a modulated light irradiation apparatus which irradiates light, which is modulated for each of the pixels in accordance with image information, at an exposure surface which includes the imaging surface.

5. (original): The imaging head of claim 4, wherein the modulated light irradiation apparatus comprises:

a laser device which irradiates laser light;

a spatial light modulation element at which a plurality of imaging element portions, which respectively alter light modulation states in accordance with control signals, are arranged in a two-dimensional arrangement, the spatial light modulation element modulating the laser light irradiated from the laser device; and

a control section which controls the imaging element portions by the control signals, which are generated in accordance with the image information.

6. (original): The imaging head of claim 5, wherein the spatial light modulation element comprises a micromirror device which includes a plurality of micromirrors arranged in a two-dimensional arrangement, angles of reflection surfaces of which micromirrors are respectively alterable in accordance with the control signals.

7. (original): The imaging head of claim 5, wherein the spatial light modulation element comprises a liquid crystal shutter array which includes a plurality of liquid crystal cells arranged in a two-dimensional arrangement, the liquid crystal cells being respectively capable of blocking transmitted light in accordance with the control signals.

8. (original): The imaging head of claim 1, wherein the alteration section alters the number of pixels employed so as to suppress variation of an image pitch in the direction which is inclined by the actual inclination angle from the scanning direction, to a certain range.

9. (original): The imaging head of claim 8, wherein, when the actual inclination angle is smaller than the predetermined inclination angle, the alteration section increases the number of pixels employed in the direction which is inclined by the actual inclination angle from the scanning direction.

10. (original): The imaging head of claim 9, wherein, when a difference between the predetermined inclination angle and the actual inclination angle exceeds a certain value, the alteration section increases the number of pixels employed by one.

11. (original): The imaging head of claim 8, wherein, when the actual inclination angle is larger than the predetermined inclination angle, the alteration section decreases the number of pixels employed in the direction which is inclined by the actual inclination angle from the scanning direction.

12. (original): The imaging head of claim 11, wherein, if a difference between the actual inclination angle and the predetermined inclination angle exceeds a certain value, the alteration section decreases the number of pixels employed by one.

13. (original): An imaging device comprising:

the imaging head of claim 1; and

a movement section which relatively moves the imaging head at least in the predetermined direction.

14. (original): The imaging device of claim 13, further comprising a resolution conversion section which converts image data so as to convert a resolution of the image data in a direction intersecting the direction of relative movement to a resolution of the image pixel group in the direction intersecting the direction of relative movement.

15. (original): The imaging device of claim 14, wherein the conversion of the image data includes at least one of magnification and reduction of the image data.

16. (original): The imaging device of claim 13, wherein the alteration section of the imaging head suppresses variation of an image pitch in the direction which is inclined by the actual inclination angle from the scanning direction, to a certain range.

17. (original): An imaging method which employs the imaging head of claim 1 and relatively moves the imaging head along the imaging surface in the predetermined scanning direction for imaging, the method comprising the steps of:

(a) altering the number of image pixels that are employed in the direction which is inclined from the scanning direction by the actual inclination angle, on the basis of the difference between the predetermined inclination angle of the imaging element group and the actual inclination angle of the image pixel group; and

(b) employing the altered number of image pixels for imaging at the imaging surface.

18. (original): The imaging method of claim 17, wherein the step of (a) altering the number of pixels employed comprises the step of:

(c) suppressing variation of an image pitch in the direction which is inclined by the actual inclination angle from the scanning direction, to a certain range.

19. (original): The imaging method of claim 18, wherein the step of (c) suppressing variation of the pitch to the certain range comprises the step of:

(d) increasing the number of pixels employed in the direction which is inclined by the actual inclination angle from the scanning direction, when the actual inclination angle is smaller than the predetermined inclination angle.

20. (original): The imaging method of claim 19, wherein the step of (d) increasing the number of pixels employed comprises the step of: (e) increasing the number of pixels employed by one, when a difference between the predetermined inclination angle and the actual inclination angle exceeds a certain value.

21. (original): The imaging method of claim 18, wherein the step of (c) suppressing variation of the pitch to the certain range comprises the step of:

(f) decreasing the number of pixels employed in the direction which is inclined by the actual inclination angle from the scanning direction, when the actual inclination angle is larger than the predetermined inclination angle.

22. (original): The imaging method of claim 21, wherein the step of (f) decreasing the number of pixels employed comprises the step of: (g) decreasing the number of pixels employed by one, when a difference between the actual inclination angle and the predetermined inclination angle exceeds a certain value.

23. (new): The imaging head according to claim 1, further comprising a scanner wherein the scanner comprises a plurality of exposure areas and a plurality of exposure heads arranged in a matrix pattern.

24. (new): The imaging head according to claim 23, wherein the exposure heads are rectangular with short sides aligned in a sub-scanning direction.

25. (new): The imaging head according to claim 1, wherein a number of pixels in the row direction is altered.

26. (new): The imaging head according to claim 23, wherein the plurality of exposure areas are physically inclined at the predetermined inclination angle.